

CLAIMS

1. A method of treating hypertension, acute myocardial infarction, cardiac arrhythmias or side effects of situational anxiety comprising administering a therapeutic amount of an atenolol, pindolol, esmolol, propranolol, or metoprolol condensation aerosol, having an MMAD less than 3 μm and less than 5% atenolol, pindolol, esmolol, propranolol, or metoprolol degradation products, to a patient by inhalation, upon activation by the patient of the formation of, and delivery of, the condensation aerosol.
2. The method of claim 1, wherein said condensation aerosol is formed by
 - a. volatilizing atenolol, pindolol, esmolol, propranolol, or metoprolol under conditions effective to produce a heated vapor of the atenolol, pindolol, esmolol, propranolol, or metoprolol and
 - b. condensing the heated vapor of the atenolol, pindolol, esmolol, propranolol, or metoprolol to form condensation aerosol particles.
3. The method according to claim 1, wherein the condensation aerosol is formed at a rate greater than 0.5 mg/second.
4. The method according to claim 1, wherein said therapeutic amount of atenolol condensation aerosol comprises between 0.1 mg and 20 mg of atenolol in a single inspiration.
5. The method according to claim 1, wherein said therapeutic amount of pindolol condensation aerosol comprises between 0.1 mg and 20 mg of pindolol in a single inspiration.
6. The method according to claim 1, wherein said therapeutic amount of esmolol condensation aerosol comprises between 4 mg and 100 mg of esmolol delivered in a single inspiration.

7. The method according to claim 1 wherein said therapeutic amount of propranolol condensation aerosol comprises between 0.2 mg and 050 mg of propranolol delivered in a single inspiration.
8. The method according to claim 1 wherein said therapeutic amount of metoprolol condensation aerosol comprises between 1 mg and 30 mg of metoprolol delivered in a single inspiration.
9. The method according to claim 2, wherein said administration results in a peak plasma concentration of said atenolol, pindolol, esmolol, propranolol, or metoprolol in less than 0.1 hours.
10. The method according to claim 1, wherein at least 50% by weight of the condensation aerosol is amorphous in form.
11. A method of administering atenolol, pindolol, esmolol, propranolol, or metoprolol to a patient to achieve a peak plasma drug concentration rapidly, comprising administering to the patient by inhalation an aerosol of atenolol, pindolol, esmolol, propranolol, or metoprolol having less than 5% atenolol, pindolol, esmolol, propranolol, or metoprolol degradation products and an MMAD less than 3 microns wherein the peak plasma drug concentration is achieved in less than 0.1 hours.
12. A kit for delivering a drug aerosol comprising:
 - a) a thin coating of an atenolol, pindolol, esmolol, propranolol, or metoprolol composition, and
 - b) a device for dispensing said thin coating as a condensation aerosol.

13. The kit of claim 12, wherein said coating has a thickness between 5.2-6.5 microns.

14. The kit of claim 12, wherein the device for dispensing said coating as a condensation aerosol comprises:

(a) a flow through enclosure,
(b) contained within the enclosure, a metal substrate with a foil-like surface and having a thin coating of atenolol, pindolol, esmolol, propranolol, or metoprolol composition formed on the substrate surface,

(c) a power source that can be activated to heat the substrate to a temperature effective to volatilize the atenolol, pindolol, esmolol, propranolol, or metoprolol composition contained in said coating, and

(d) inlet and exit portals through which air can be drawn through said device by inhalation,

wherein heating the substrate by activation of the power source is effective to form an atenolol, pindolol, esmolol, propranolol, or metoprolol vapor containing less than 5 atenolol, pindolol, esmolol, propranolol, or metoprolol degradation products, and drawing air through said chamber is effective to condense the atenolol, pindolol, esmolol, propranolol, or metoprolol vapor to form aerosol particles wherein the aerosol has an MMAD of less than 3 microns.

15. The kit according to claim 14, wherein the heat for heating the substrate is generated by an exothermic chemical reaction.

16. The kit according to claim 15, wherein said exothermic chemical reaction is oxidation of combustible materials.

17. The kit according to claim 14, wherein the heat for heating the substrate is generated by passage of current through an electrical resistance element.

18. The kit according to claim 14, wherein said substrate has a surface area dimensioned to accommodate a therapeutic dose of atenolol, pindolol, esmolol, propranolol, or metoprolol composition in said coating.
19. The kit according to claim 12, wherein a peak plasma concentration of atenolol, pindolol, esmolol, propranolol, or metoprolol is obtained in less than 0.1 hours after delivery of condensation aerosol to the pulmonary system.
20. The kit of claim 11, further including instructions for use.